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PNEUMOCYSTIS PNEUMONIA: CASE REPORT WITH AN UNUSUAL PRESENTATION

Microbiology

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ABSTRACT

A case report of Pneumocystis jirovecii pneumonia in past known as Pneumocystis carinii pneumonia (PCP), with unusual presentation in patient with AIDS. This is a brief review of the case history discussed to help in the diagnosis and treatment in such cases.

KEYWORDS

AIDS (acquired immunodeficiency syndrome).

INTRODUCTION

Pneumocystis jirovecii pneumonia is commonest pulmonary opportunistic infection in patients infected with HIV in western countries[1]. However tuberculosis is most common pulmonary infections in AIDS patient in India[2], Pneumocystis jirovecii pneumonia is comparatively less frequently reported entity in such patients[2]. Non HIV patients suffering from hematological malignancy, immunosuppressive medications, solid organ transplant and severe malnutrition are also at risk of P. jirovecii infection.

The roentgenographic pattern of *Pneumocystis jirovecii* pneumonia is diffuse pulmonary infiltration. This presentation is described in approximately 80% of patients with AIDS[3]. Unusual radiological findings of Pneumocytis jirovecii infection have been reported by 20% of cases which includes lobar pneumonia, hilar adenopathy, pneumothorax, honey comb appearance & cavitation[4]. This case report of Pneumocystis pneumonia in AIDS patient with unusual presentation.

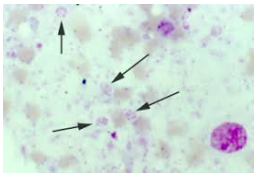
CASE REPORT

A 15 year old male a known case of HIV was admitted to the hospital, with CD4 count 175 had history of fever, cough, chest pain, nocturnal sweating, dyspnea progressive in nature with pain in abdomen since 10 days. On examination patient's BP was 130/70mm Hg, pulse 96/minute, respiratory rate 40/minute and temperature 38°C, Spo2 76%. Per abdomen examination showed generalized tenderness. On chest auscultation bilateral crepitus with more rales heard over right upper pulmonary area. Chest x-ray showed B/L infiltrates. Computerized tomography showed pneumonitis with mild pleural effusion and multiple thin wall cavitary lesions in lower lobe of right lung.

Other laboratory investigations report showed hemoglobin 11 gm%, TLC 4300/mm^3 with 80% polymorphs, 15% lymphocytes. Blood culture, induced sputum for AFB, gram staining and sputum and urine samples were send for culture & sensitivity to Microbiology department the samples send for culture & sensitivity were sterile . Samples were also sent for liver function test, renal function test. Serum LDH was 1120 IU/L. Tuberculin test was negative.

BAL (brocheoalvelar lavage) was send after fibreoptic bronchoscopy which was negative for any atypical cells ruling out any malignancy also no acid fast bacilli seen on ZN staining. On Giemsa staining of bronchial aspirate foamy exudate with greyish bluish cytoplasmic masses were seen with tiny red nuclear streaks which is characteristic of clusters of P. Jirovecii trophozoites.

Patient was given intra venous cotrimoxazole for 5 days later switched to oral cotrimoxazole for 2 weeks , patients condition improved with improvement of pulmonary symptoms, after 1 week of medication. Repeat x-ray was done after 2 weeks of medication which showed marked decrease in interstitial infiltration but the size of cavitary lesions remained unchanged. Patient was discharged after 3 weeks and oral cotrimoxazole was continued for prophylaxis for about month.



Giemsa stain of BAL showing foamy exudate with greyish bluish cytoplasmic masses were seen with tiny red nuclear streaks which is suggestive of clusters of P. Jirovecii trophozoites.

CXR Showing B/L interstitial infiltration with mild pleural effusion

DISCUSSION

Pneumocystis jirovecii pneumonia is life threatening infection that occurs primarily in patients with HIV with CD4 count less than 200, but Pneumocystis pneumonia cases have also been reported in non HIV patients in the past studies. Diagnosis of Pneumocystis is difficult as it cannot be cultured on artificial media however in the above case history we would like to point out that laboratory reports of Microbiology regarding CD4 count and Giemsa staining ,Serum LDH levels along with unusual radiological findings should always be considered and correlated while dealing with such patients. As unusual findings in Pneumocystis pneumonia can be seen in about 20% of cases. Therefore it is important to correlate all findings with clinical history of patient for effective treatment. Our patient was discharged after 3 weeks of intensive care and treatment and is in compliance with ART.

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